An Essay on
Pneumonia
Respectfully Submitted to
the Faculty of the
Homœopathic Medical College
of Pennsylvania
on the
Seventh day of February
One Thousand Eight Hundred and Fifty-Two
by
John G. Wood.
of New Hampshire

Pneumonia

This disease is common in the northern and middle regions of the United States, prevailing especially during spring and autumn, and known in common parlance as lung fever. The mortality attending it is very great and varies according to age - according to Drs Stokes & Blake - old persons seldom recover. It proves fatal in nearly every case. Middle age is the most favorable period for recovery, the mortality being near ten times in young children about thirty per cent. The fatality of the disease however is frequently increased by local causes, and varies in the same latitudes in different seasons. It is most fatal when it makes its appearance as a secondary disease. Usually but one lung is affected, and generally not the whole of that, sometimes however double pneumonia exists. The causes of pneumonia are similar to those which usually produce inflammation of the air passages: Cold, sudden changes of temperature, sudden transition from heat to cold, especially when the atmosphere

" Pneumonia

This disease is common in the northern and middle regions of the United States, prevaling especially during spring and autumn, and known in common parlance as lung fever. The mortality attending it is very great. and varies according to age - according to Prof Alonzo Clarke - old persons seldom recover. it proves fatal in nearly every case. Middle age is the most favorable period for recovery, the mortality being nearer fifteen in young children about thirty per cent. The fatality of the disease however is frequently increased by local causes, and varies in the same latitudes in different seasons - it is more fatal where it makes its appearance as a secondary disease - usually but one lung is affected, and generally not the whole of that - sometimes however double pneumonia exists. The causes of pneumonia are similar to those which usually produce inflammation of the air passages - vicissitudes of temperature - sudden transition from heat to cold especially when the atmosphere

is humid - excess of heat, - miasms - over exertions - mechanical injuries: fractures of the ribs - inhalation of noxious gases chemical irritants or irritants of any kind

Authorities differ as to the pathological phenomena of Pneumonia - Many have defined it to be an inflammation of the parenchyma of the lungs, this position I am disposed to accept - provided the term parenchyma is used in its widest signification - to include the air vesicle, as well as the uniting areola tissue, vessels nerves &c, I do not mean to say, that the inflammation affects only the air cells - and smaller ramifications of the bronchi - for such a condition would indicate bronchitis - but I believe the air vesicles, which are not included in the parenchymatous structure of the lungs by some Pathologists and anatomists with the vessels nerves &c to be implicated in the disease. The effusion resulting from the inflammation is into the air vesicles partially, or

completely filling them, thereby preventing the healthy performance of their function - the extent of the effusion depends upon, or rather constitutes the different stages of the disease - as I shall hereafter explain. - Pneumonia is susceptable of absolute cure, and there is no way to account for this except that the effusion does take place upon the free surface - whom it can find a ready exit - and furthermore the constituent parts of matter found in the cells are identical with that mixed with the mucus expectorated during the disease.

Pneumonia is divisable into three stages.

1st The period of congestion - or engorgement

2nd That of red hepatization - red softening

3d That of grey hepatization - grey softening

Post-mortem appearances of the lungs

In the first stage there will be a certain degree of effusion - though not in sufficient quantity

to entirely fill up the air cells - the color of which is something like that of venous blood - the lung is heavier than natural - it will float upon water but not so high as a healthy lung - it will crepitate when pressed, but not so much as a sound one. if an incision is made into it the internal will resemble the external surface except that it may be a little more greyish, and around the cut will oze out a frothy-groomous fluid, recollecting that in post-mortem examination the posterior portion of the lung will be congested from gravitation the differance between the two is, that when congested from gravity it does not extend half way through the lung: In the second stage the air vesicles are filled compactly by fluid that has been effused - the lung is now much like the liver in appearance - from whence this stage derives its name - there is no crepitation now because

there is no air in the cells, and it will sink in water. the finger can readily be thrust into it, and hence its name of softening. when torn across it presents a granular appearance precisely similar to that given by the liver under similar circumstances

In the third stage the lung is consolidated or nearly so, with a grey color instead of red, as in the second stage - sometimes however we find a mixture of the two in the transition stage - there it presents a yellowish appearance - all the difference between red and gray hepatization is, in the latter the red corpuscles of the blood which make the second red are decomposed, and the coloring matter removed. this stage has some of the properties of the second - it will sink in water, and does not crepitate - in the advanced stage we will find upon pushing the finger into it a creamy or

milky fluid will fill the cavity made, which is an indication of softening of the effusion previous to expectoration,— in strong robust persons this fluid may be absorbed without any expectoration— the inflammation begins to subside from the time when the red hepatization ceases— the blood begins to circulate more freely— and the lining membrane of the cells will secrete a fluid which dissolves the matter heretofore effused, as this is expectorated the air begins to circulate in the air cells again and aids in the solution of matter contained therein, the epitheleum membrane is quickly reformed and the cure complete

Physical Signs of Pneumonia

In the first stage there are but one or two important signs - 1st Crepitant rale. this is a sound resembling that of salt thrown upon the fire, it is caused by the bursting of bubles of air in the plaid effused into the cells - this is common in both this disease and Capillary bronchitis - but the diagnosis between the two is perfectly simple - bronchitis is always universal, or at least usually so - all the Capillaries are affected when it occurs spontaneously - the search for the sound should be made at the posterior and inferior part of the lung - when found upon both sides, we may conclude that it is general in as much as pneumonia ordinarily affects but one side at a time - this is indicated as soon as effusion takes place, and sometimes when it cannot be perceived when the patient is breathing naturally, it may be produced by a forced inspiration it is a pretty constant sign - in 320 cases exam-

ined by Andral it was absent in but four - and the reason of this was probably, that it was situated in the central portion of the lung and surrounded by healthy portions which being a bad conductor of sound it was not transmitted to the surface.
When pneumonia is fairly established there is a certain degree of dullness upon percussion.
Bronchitis never gives dullness - but sometimes pneumonia is complicated with bronchitis, or rather bronchitis with pneumonia, affecting both sides and pneumonia one - this complication is severer than when either exists alone - when pneumonia is double it does not commence generally upon both sides at the same time - the respiratory murmur is concealed by the crepitant rale -
In the second stage of the disease when the air cells have been consolidated, the crepitant rale will be lost - dullness upon percussion is likewise present

also bronchophony and tubular respiration
In the third stage, when resolution is taking place, we have crepitant - sub-crepitant and mucus rales. the sub-crepitant rale occurs in pneumonia only when resolution is taking place it is a somewhat louder sound than the crepitant whenever heard it is an evidence that there is an effusion into the bronchial tubes at some distance from the air cells. the mucus rale, is produced by the contact of air with a viscid fluid in tubes of still larger calibre than those in which the sub-crepitant is produced. These three sounds are frequently mingled together in the breaking up of pneumonia. If the patient recovers these sounds gradually cease - first bronchophony than mucus rale - than sub-crepitant after which - dullness on percussion - then crepitant. sometimes however a crepitant remains after the disease is considered cured

Rational Signs of Pneumonia

Before the discovery of physical signs. this was recognised by the older Physicians by means of rational signs - still in many instances the diagnosis would be doubtfull with the physical signs. It begins like all other inflammations with a certain degree of lassitude and shortly after this a well marked chill. this chill is peculiar to this disease. it is not a chilliness or a repetition of slight chills. but one good smart chill. and all is over with. and then ensues a flush of heat. Puerperal peritonitis is the only other disease that commences with a marked chill. it is not absolute however in this disease. this chill then is an important symptom. Pain although not constant. still pain in the side is a pretty frequent accompiment of pneumonia this arises not from the pneumonia. but from an inflammation of the pleura.

"Whenever a viscus is inflamed and the inflammation extends to the surface, its linging membrane almost inverably takes on inflammation also. So general is this concomitant of pleurisy that some physicians term pneumonia, Pleuro Pneumonia. We do not however have the signs of pleurisy with the exception of pain.

Cough - a cough following a chill with pain in the side, is pretty good evidence of pneumonia it is caused by some irritation in the bronchial tubes - Expectoration. this at first is slight but goes on increasing - this symptom is worthy our notice, for when present, it is worth as much as all the rest, both physical and rational it is not always present, in more than one half of the cases however it will be present - at first it is viscid - and when spat into a cup adheres to it. if the cup be turned up side down it leaves

it with reluctance. it is sometimes transperant or semi-transpearant - seldom if ever opake - again it may be slightly orang- or rust color - or like prune juice - this peculiar color is given to it by the blood which is effused into the air cells. it is not a mere staining upon the surface but the coloring matter is closely intermingled through the entire mass. when the expectoration is of prune juice color it shows the case to be much graver than when of a brighter tint - this peculiar expectoration occurs about the second day. and afterwards assumes a whitish color - this shows that the pneumonia has passed into the third stage - after this it becomes more purulent. in old persons the expectoration is continued for a great length of time. and is perfectly white.

If pneumonia were perfectly simple in its character. we might expect the expectoration to be the

same in all cases. but it is frequently mingled with or follows a bronchitis. and the effusion from this inflammation dilates that from the air cells. the more abundant the secretion after it has reached a certain quantity - the more severe the bronchitis: The face in this disease is suffused with a rich healthy flush. this characteristic will enable us to distinguish this disease from any other - as the flush is more healthy in its appearance. Delirium - sometimes occurs in pneumonia - never showing in the earlier stage - but when it does present itself it is an indication that the case is a very grave one it is not any new disease of the brain. but appears to be the result of a nervous irritability together with improper aeration of the blood. this impure blood circulating in the brain stimulates it to unnatural activity. this delirium is quite

characteristic in the last stage and deserves carefull notice, as it is frequently very dificult, pneumoni- appears to prefer the right lung - why this is so we are ignorant. several theories have been formulgated in regard to it, none of which are satisfactory it occurs more frequently in the inferior lobes

Therapeutics

In the first stage Aconit. is the best remedy, its indication are, a feeling of lassitude, with a chill then ensues a flash of heat, with general febrile symptoms - such as dry hot skin - rapid and hard pulse - great thirst - with dry red tongue and fauces - sensation of heat in the chest with anguish impeding the respiration - followed by a warm sweat on the forehead - acheing oppressive pains in the chest or side of chest - dry cough - and extreme nervousness with palpitation of heart - as this remedy is the greatest antiphlogistic in the Materia Medica it is sometimes capable of eradicating this disease alone - if it does not eradicate it will mitigate and prepare the way for other remedies Bryonia is indicated in the congestive stage - expectoration white and rusty or brick-dust color face flushed and dark red - stitches in the side and below the left scapula - with a heavy pain

extending across the chest - the carotides throb violently - when it is accompanied with gastric symptoms - yellow skin - the fever is typhoid

Pulsatilla, is suitable to mild phleymatic temperaments - when it is caused by chagrin - less inflammation - more expectoration. Typhoid pneumonia pneumonia caused by Measles - also when there is a chronic catarrh - with billous symptoms

In the second stage Tartar emetica is the principal remedy - the indication for remedy is loss of crepitant rale. dullness upon percussion bronchial respiration auscultation reveals bronchophony - considerable expectoration of mucus with little or no blood - or scanty expectoration of frothy blood streaked or saffron colored mucus

Belladonna. its indication are dull tensive pain in the fore-head especially over the eyes - dimness of sight - vertigo - pressure in the chest affecting

this

the heart - a sharp pricking pain under the sternum just above the ensiform cartilage - also a sensation as though the throat were filled up with mucus - Bell may be given alternately with Acon - it is also a good remedy when there is delirium congestion of blood to the head - lips and tongue dry and cracked and the disease assumes a typhoid character. When this disease is attended by difficult tenacious sanguinous expectoration with much cough and feeling of anxiety in the chest particularly at night Nux may be administered in one of the lower dilutions

Arsenicum is indicated in great prostration of strength - tongue and lips of a dark red or blue color - great* and dryness of trachea and esophagus much thirst - diarrhea - roaring and buzzing in the ears also shortness of breath causing great weakness and debility of the patient - loss of consciousness - frequent

heat

intermittent pulse - Phosphoric acid is also a good remedy when there is a copious diarrhea and excessive debility
Phosphorus - this remedy is considered by some to be applicable to all stages of this disease its indication are a burning sticking pricking pain in the chest - with much cough which agrivates these pains - expectoration rust color - also when the cough is dry and hacking with out expectoration in the second stage when the air vesicles are filled with fluid - it will promote the softening of the effusion. Cannabis is a usefull remedy when the lower portion of the lung is the seat of inflammation especialy the left lung - when the apex of the heart strikes against the chest forcably - palpitation of heart with dull shocks in region of heart - body cold - face hot - Grocus is applicable in short oppressed hurried breathing - and full pulse - hot dry burning skin violent dry cough especialy at night

Arnica is the remedy when the disease is caused by some local injury - When pneumonia attacks scrofulous persons - or persons that have a psora Sulphur is to be used - also when the respiration is short and difficult with night sweats

There are many remedies which may prove useful such as - Mercur. Kali carb Rus tox Hyos Lyco China Ipec Cham Squilla Tart Ect. as symptoms may indicate